RADUSCEK, K.

Yugoslavia (430)

Agriculture-Plant and Animal Industry

Organization of work in a forest nursery. p. 297. SUMARSKI LIST. Vol. 75, no. 8-10, Aug.-Oct. 1951.

East European Accessions List. Library of Congress, Vol. 2, no. 3, March 1953. UNCLASSIFIED.

RYSHKINA, T.A., assistant; RADUSHEV, V.I., assistant.

Composition of precipitates settling in the distiller during soda ash production. Nauch. trudy NPI 26:276-281 '55. (MLRA 9:12)
(Soda industry)

15-1957-10-13971

The Problem of the Mineralogy of the Roof and Floor Rocks of the Coal Layers in the Donbass (Donets Basin)

monothermite, pyrophyllite, dispersed quartz, gibbsite, and nontronite. The hydromicas of the illite type consistently show endothermic reactions at 120° to 180° and 540° to 560° on all the thermal curves. Depending on the ratio of RO to R_2O_3, illites may be subdivided into alkaline--$RO:R_2O_3 < 0.15$, normal--$RO:R_2O_3 = 0.15-0.70$, and alkaline earth--$RO:R_2O_3 > 0.70$. It was ascertained that alkaline-earth illite is confined to the roof rocks, alkaline illite to the coal beds. Normal illite is present both in the roof rocks and in the floor rocks. Nontronite, pyrophyllite, and monothermite were discovered only in soil from the coal beds. Non-clay minerals in the argillites are present in insignificant quantities and do not differ in composition from those in other clastic rocks of the Donbass. In order to solve the problem of the facies conditions of accumulation of the roof rocks and floor rocks of the coal beds, it is necessary to make broader studies of the mineral composition of the argillaceous rocks enclosing the coal layers.

Card 2/2

Ye. V. Ostrovskaya

RADUSHEV, V.I. 20-1-49/64

AUTHOR RADUSHEV, V.I.,

TITLE On the Chemogeneous Formation of Carbonates in Rivers of the Arid Zone. (O khemogennom karbonatoobrazovannii v rekahh aridnoy zony - Russian)

PERIODICAL Doklady Akademii Nauk SSSR, 1957, Vol 114, Nr 1, pp 180-181 (U.S.S.R.)

ABSTRACT The author of the paper under review investigated with greatest accuracy numerous samples concerning present sediments in the river beds of the Don and the Volga. The samples contained in addition to the common (typical) forms of $CaCO_3$ also very small acicular and laminar crystals and spherulites of the carbonates. On basis of his detailed investigations the author of the paper under review draws the following conclusions: There is no doubt that in the lower parts of the rivers of the arid zone there takes place the process of the chemogeneous formation of carbonates. From a morphological point of view, this carbonate differs in no way from the analogous forms of the carbonate which are known to us(marine deposits).Therefore it is of the utmost importance to take into consideration the additional substance(coming from the river) because otherwise we speak of'marine formation of carbonate'. (4 reproductions).

ASSOCIATION Not Given.

PRESENTED BY

SUBMITTED

AVAILABLE Library of Congress

Card 1/1

20-2-49/60

AUTHOR: Radushev, V. I.

TITLE: On the Mineralogical Composition of the Solid Portion of the Don River Outlet (O mineralogicheskom sostave tverdoy chasti stoka r. Dona)

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol. 114, Nr 2, pp. 411-413 (USSR)

ABSTRACT: The Don River feeds the Azov Sea not only with dissolved substances but also with solid bed load. Data on this solid bed load are almost entirely lacking. Before the regulation of the Don River was carried out, the author of the paper under review investigated numerous samples of recent river-bed alluvium near the mouth of the river. Table Nr 1 of the present paper contains a compilation of the mineralogical composition of the "sandy-aleuritic" part and of the "pelitic" part of the deposits. The bed load of the Don consists of approximately forty minerals. The diversity of minerals in the sandy-aleuritic fraction is surprising. In addition to the constant complex of minerals (quartz, zirconium, rutile,

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On the Mineralogical Composition of the Solid Portion of the Don River Outlet

and others) we also find there minerals with weak resistance against weathering, both rock-forming and accessory (hornblende, pyroxenes, biotite, apatites and others). They probably come fracture material of the loesslike rock at the Don. The loesslike clay soils contain larger amounts of analogous unstable minerals which during the Old Quaternary were carried away from the area of Glacial abrasion. An almost complete absence of protoxide-iron combinations (pyrite, marcasite, siderite, and others) is characteristic. This is connected with the high capacity of oxidation of the Don water which has an absolute O_2 concentration of 7.29 - 15.5 mg/l. Here the annual average of the pH fluctuates between 7.5 and 7.9. Under these circumstances, the ion of the bivalent iron is strongly soluble. Among the clay minerals, the hydromicas of the type of the illite and montmorillonite are found most frequently. They come mainly from the washed-out Quaternary loesslike and "scythic" clays, which are far developed at the lower Don. Closer to the center of the drainage area of the Don, monothermite is the main mineral. In the northern part of the drainage area of the Don, in the Devonian, Carboniferous, and Cretaceous, kaolinite was found everywhere. This gives cause to the assumption that when

20-2-49/60

On the Mineralogical Composition of the Solid Portion of the Don River Outlet

Novocherkasskiy kaolinite is transferred into the arid zone, it is partially transformed into montmorillonite and illite. The alkaline milieu conditions prevailing at the lower Don lead to the hydration of the clayey minerals and favor in them the solidification of alkaline and alkaline-earthy elements by sorption processes. This explains the almost complete absence of kaolinite in the bed load of the Don, and also the preponderance of alkaline complexes of the clayey minerals. There are 1 table and 13 references, all of which are Soviet.

ASSOCIATION: Novocherkassk Polytechnical Institute imeni S. Ordzhonikidze (Novocherkasskiy politekhnicheskiy institut im. S. Ordzhonikidze)

PRESENTED: November 27, 1956, by N. M. Strakhov, Member of the Academy

SUBMITTED: November 12, 1956

AVAILABLE: Library of Congress

Card 3/3

RADUSHEV, V.I.

AUTHORS: Radushev, V. I., Kobilev, A. G., 20-1-45/58

TITLE: Data on the Diagenesis of Alluvial Deposits of the Arid Zone of Sedimentation (K poznaniju diageneza allyuvial'nykh osadkov aridnoj zony sedimentatsii)

PERIODICAL: Doklady AN SSSR, 1958, Vol. 118, Nr 1, pp. 160-163 (USSR)

ABSTRACT: Most of the aluvial deposits are during a large part of the year under subaerial conditions. In numerous samples of various facies of the recent alluvium of the Don and tributaries, as well as of the Volga, the authors determined some peculiaritues of the diagenesis as described in the title. The water near to the ground possesses a high capability of oxidation (reference 1), therefore the oxidizing authogenic formation of minerals is far developed in the deposits of the river-bed facies during the early diagenesis. This is also promoted by a free aeration of the sand deposits and by the low content of organic carbon (figure 1). In this connection the generation of calcium carbonates and iron hydroxides takes place. The occurrence of carbonates of chemical origin in the deposits is in connection with the supersaturation of the water near to the ground with Ca^{++}- and HCO_3^--ions during the warm season (reference 2). On transition from the shallow places to subaerial conditions theauthigenic enrichment with iron

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Data on the Diagenesis of Alluvial Deposits of the Arid Zone of Sedimentation. 20-1-45/58

by sedimentation of colloidal iron oxides, as crusts and films, on clastogenic grains by evaporation of aqueous solutions takes place. Further changes during the early diagenesis are redistributions of the substance of the river-bed deposits. Carbonates ($CaCO_3$), oolites and spherolites form. The sands is cemented by iron hydroxides. The redistribution of the substance intensively takes place in strongly moistened deposits. These stages, the oxidation stage of the formation of minerals and the stage of redistribution, may take place in parallel or independently of each other and are independent of the change of seasons. In the deposits of the facies of the flooded region the type of diagenetic processes changes. Here is much more organic carbon (figure 1) whose content increases from aleurolites in the direction of clays The microorganism thriving here, especially in moistness, draw oxygen from the medium, whereby the latter assumes a reducing character; After the removal of the flood the oxygen deficiency does not change very much either, as the pelite deposits are slightly permeably and rich in organic substances. The protoxide medium leads to the transition of ferric oxide to ferrous oxide (pyrite, troilite, hydrotroilite, mel'nikovite, vivianite). Sulphide iron plays an especially important part. It indicates that

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H_2S which precipitates sulfite compounds of irom is formed. H_2S is also formed in the mud-solutions in the arid zone of the rivers by reduction of sulfates. Various hydrohetites arriving with the normal splinter-material represent the source of iron. During the larger part of the year the sediments of the flooded region are under the influence of soil-forming processes and of weathering. Thereby prismatic and lumpy structures, root traces and other channels form. By these processes the ferrosoferric-oxide forms are partially again coverted to oxide forms. The redistribution of the substance here takes place much more intensively than in the river-bed facies, as (figure 2) the aleurolites and clays are much moister here than the sands of the latter facies. A centrifugal diffusion is brought about here, which is indicated by the position of hydrohetite-rings around the pore-canals. Under the conditions of increased evaporation the solubility of calcium-bicarbonate in the warm water of the pore--canals decreases. It is precipitated as calcium-monocarbonate and fills up the canals from the periphery toward the center. The diagenesis is complicated by the soil-forming processes and by weathering, but often completely suppressed under subaerial

conditions. The alternation of the two initially mentioned stages of diagenesis depends on the seasonal floods. An oxidizing a reducing and a redistributing stage of mineral new formations may be distinguished in the facies of the Altarme("staritsy"). There are 2 figures, 6 references, 5 of which are Slavic.

ASSOCIATION: Novocherkassk Polytechnic Institute imeni S. Ordzonikidze (Novocherkasskiy politekhnicheskiy institut im. S. Ordzhonikidze)

PRESENTED: July 23, 1957, by N. M. Strakhov, Academician

SUBMITTED: July 1o, 1957

AVAILABLE: Library of Congress

3(8)

AUTHORS: Shamray, I. A., Radushev, V. I. SOV/20-124-4-49/67

TITLE: Glauconite From the Cretaceous Sediments of the Belaya River in the Northern Caucasus (Glaukonit iz melovykh otlozheniy r. Beloy na Severnom Kavkaze)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 4, pp 900-902 (USSR)

ABSTRACT: In the region mentioned above a constant horizon of glauconitic sands and sandstones in the Lower Cretaceous (Aptian) can be observed in many places. On the Belaya river it attains a thickness of 15 m and is characterized by a high glauconitic concentration which often attains a percentage of 60-75 %. The respective strata are described here. They contain also fine intermediate strata and bizarre dendroid siderite concretions which are probably pseudomorphs of wood remnants, which also contain glauconitic inclusions. The glauconite grains are green, ball-shaped or elliptical, slightly transparent only at the edges and their size varies between extremely small dimensions and 0.6-0.7 mm. In polarized light there appears a typical aggregate extinction with double light refraction. Table 1 shows the chemical composition of glauconite and the crystallochemical formula which is very approximate to that mentioned in reference 2. The numerical coefficient (chislovoy koeffitsient) of

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Glauconite From the Cretaceous Sediments of the Belaya River in the Northern Caucasus

silicon in the tetrahedra amounts to 3.58, that of aluminum in the octahedra to 0.21. Part of the silicon is replaced in the tetrahedra by aluminum. Glauconite is similar to the celadonites (Ref 2) due to a rather high content of iron in the octahedral layers. Table 2 presents the radiometric measurements and the comparison between them and the Debye electronograms of earlier described (Refs 1,2,3,5) glauconites. The thermal curve of heating (Fig 1) indicated two marked endothermic intermissions (ostanovka) as being characteristic of standard glauconites, i.e. at 190° by loss of the hygroscopic water and at 575° by separation of the constitution water. Up to 100° about 4 % water are separated (Fig 2). up to 400° the water loss is insignificant. The largest amount of water is separated between 400 and 600°. At 700° dehydration has virtually been completed. The total loss of water amounts to 9 % approximately. The glauconite deposits within the catchment area of the Belaya river may have been built up in the area of an extremely shallow body of water near the shore, which is confirmed by a high content of organic substances as well as tree-like sideritic pseudomorphs. A high content of oxide iron is evidence of the small depth in which the deposits were formed. Glauconites are regarded as accumulations in the upper shelf

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Glauconite From the Cretaceous Sediments of the Belaya River in the Northern Caucasus

area (Ref 1). Glauconite was formed by hydrochemical synthesis during the earliest stage of diagenesis when the reductive reactions had not yet attained the climax. Subsequently, siderite was produced when the decomposition of organic substances increased and the reductive processes had attained the climax. Thus, siderite was formed in a later stage of diagenesis (Refs 7,8). As the glauconitic material is weakly sorted, it is syngenetic-autochthonous. A certain displacement and sorting within the intermediate strata most abundant in glauconite seems to be possible (Ref 9). There is no doubt about the great practical importance of the above mentioned deposits. There are 2 figures, 2 tables, and 10 references, 9 of which are Soviet.

ASSOCIATION: Rostovskiy-na-Donu gosudarstvennyy universitet (Rostov-na-Donu State University)

PRESENTED: October 11, 1958, by N. M. Strakhov, Academician

SUBMITTED: October 9, 1958

RADUSHEV, V.I.

Holocene terraces of the lower Don Valley. Biul. MOIP. Otd.geol. 37 no.3:58-60 My-Je '62. (MIRA 15:10)
(Don Valley--Terraces (Geology))

RADUSHEV, V.I.

Pseudomorphoses of fluvial sediments. Priroda 51 no.12:38 D '62. (MIRA 15:12)

1. Novocherkasskiy politekhnicheskiy institut im. S. Ordzhonikidze. (Don River—Pseudomorphs)

USSR / Human and Animal Physiology (Normal and pathological).
Physiology of Work and Sport.

Abs Jour : Ref Zhur - Biologiya, No 13, 1958, No. 60884

Author : Radushinskiy, L. A.
Inst : Not given
Title : The Use of Tensiometry in the Study of Human Work Movements

Orig Pub : Fiziol. zh. SSSR, 1957, 43, No 8, 804-805

Abstract : For the characterization of the correctness of methods of sawing, the saw was equipped with tensiometric indicators, connected to a bridge device, and the potentials were recorded after magnification, by an oscillograph. The author recommends this method for the recording of work with different types of manual instruments. -- M. A. Gritsevskiy

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RADUSHINSKIY, N.A.

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PHASE I BOOK EXPLOITATION

Satel', Eduard Adamovich

Osnovy organizatsii i planirovaniya mashinostroitel'nykh predpriyatiy SSSR (Principles of Organization and Planning of Machine-building Enterprises in the USSR) Moscow, Mashgiz, 1957, 155 P. 12,000 copies printed.

Ed.: Sochinskiy, A.R., Engineer; Ed. of Publishing House: Barykova, G.I.; Tech. Ed.: Uvarova, A.F.; Managing Ed. for Literature on the Economics and Organization of Machine Building (Mashgiz): Saksaganskiy, T.D.

PURPOSE: This book is intended as a text-book for students of industrial engineering institutes and industrial engineering departments of technical vuzes and is authorized as such by the Ministry of Higher Education. It is also considered useful to engineering and technical personnel in machine-building enterprises.

Card 1/4

...machev
...onsists of
... inclined drilling
...nine tools. This line
...ic motors with a total capacity
...oyed in machining cylinder blocks
... motor. All equipment is served by three
... place of the fifty-six employed prior to

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automation. In another example, the automation equipment at the Moscow Bearing Plant is reported to consist of a line which includes eighty-four units, of which sixty-nine are machine tools. This automated line machines bearing races, coats the races with anticorrosive substances, assembles, and packs both roller and ball bearings. ChaptersI to V were written by Professor E.A. Satel' and reviewed by Doctor of Economic Sciences K.I. Klimenko; chapter VI was written by Candidate of Technical Sciences N.A. Radushinskiy and reviewed by Engineer S.A. Dumler. All chapters were read by the Department of Organization and Production Economics of the Moscow Automechanic Institute. There are no references.

Card 3/4

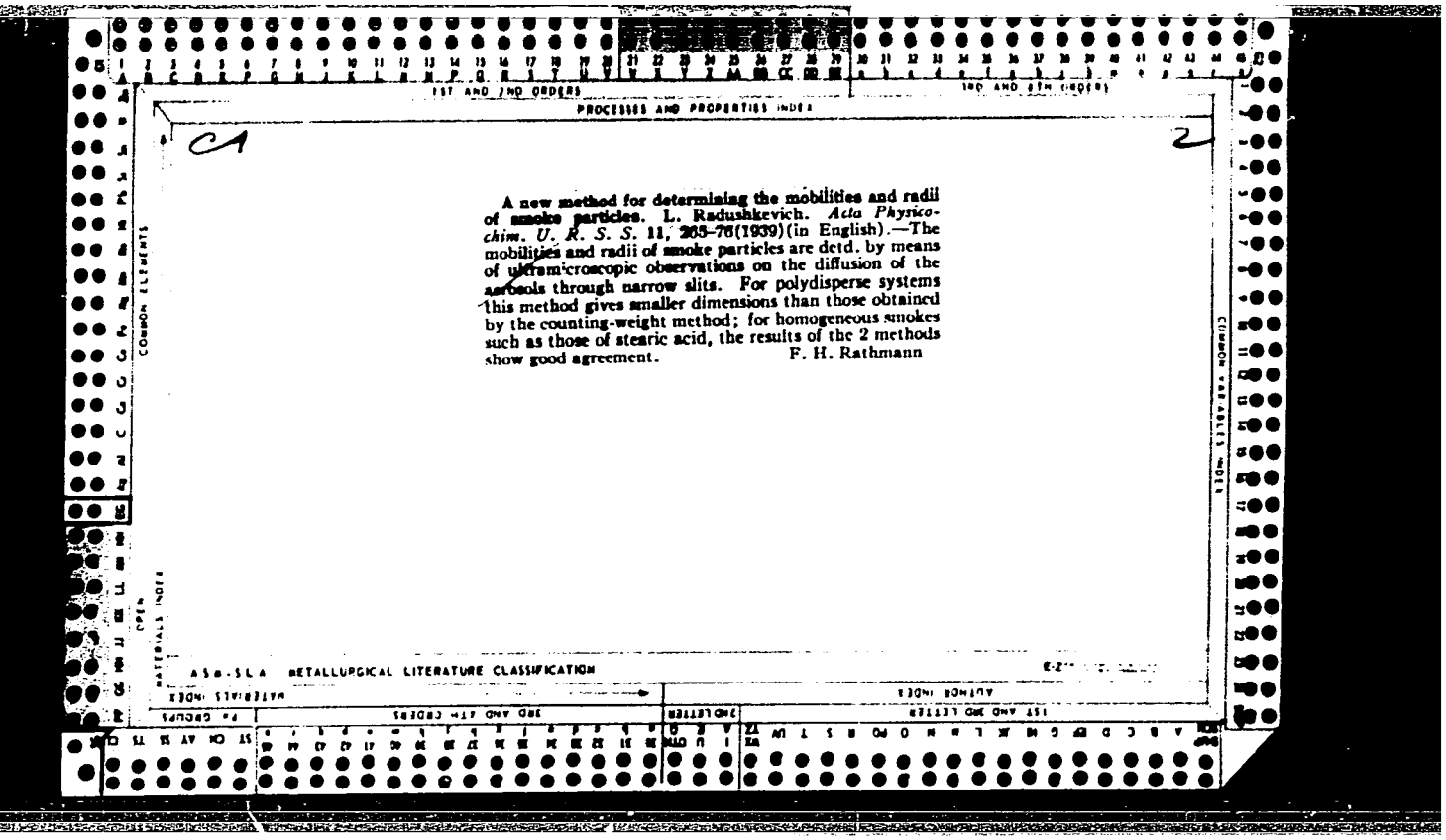
RADUSHKEVICH, B.V.; VASIL'YEV, Yu.V.; KONKIN, A.A.

Studying the viscosity of fluorine-containing polymer melts. Khim. volok. no.5:19-20 '65. (MIRA 18:12)

1. VNIIV (for Radushkevich, Vasil'yev). 2. Moskovskiy tekstil'nyy institut (for Konkin).

RADUSHKEVICH, David Yefimovich

[Trade-union work on State farms]Profsoiuznaia rabota v otdelenii sovkhoza. Moskva, Profizdat, 1961. 44 p. (MIRA 16:1)
(Trade unions) (State farms)



PROCESSES AND PROPERTIES INDEX

C1

2

A new method for determining the mobilities and radii of smoke particles. L. Radushkevich. *Acta Physicochim. U. R. S. S.* 11, 265-76(1939)(in English).—The mobilities and radii of smoke particles are detd. by means of ultramicroscopic observations on the diffusion of the aerosols through narrow slits. For polydisperse systems this method gives smaller dimensions than those obtained by the counting-weight method; for homogeneous smokes such as those of stearic acid, the results of the 2 methods show good agreement.

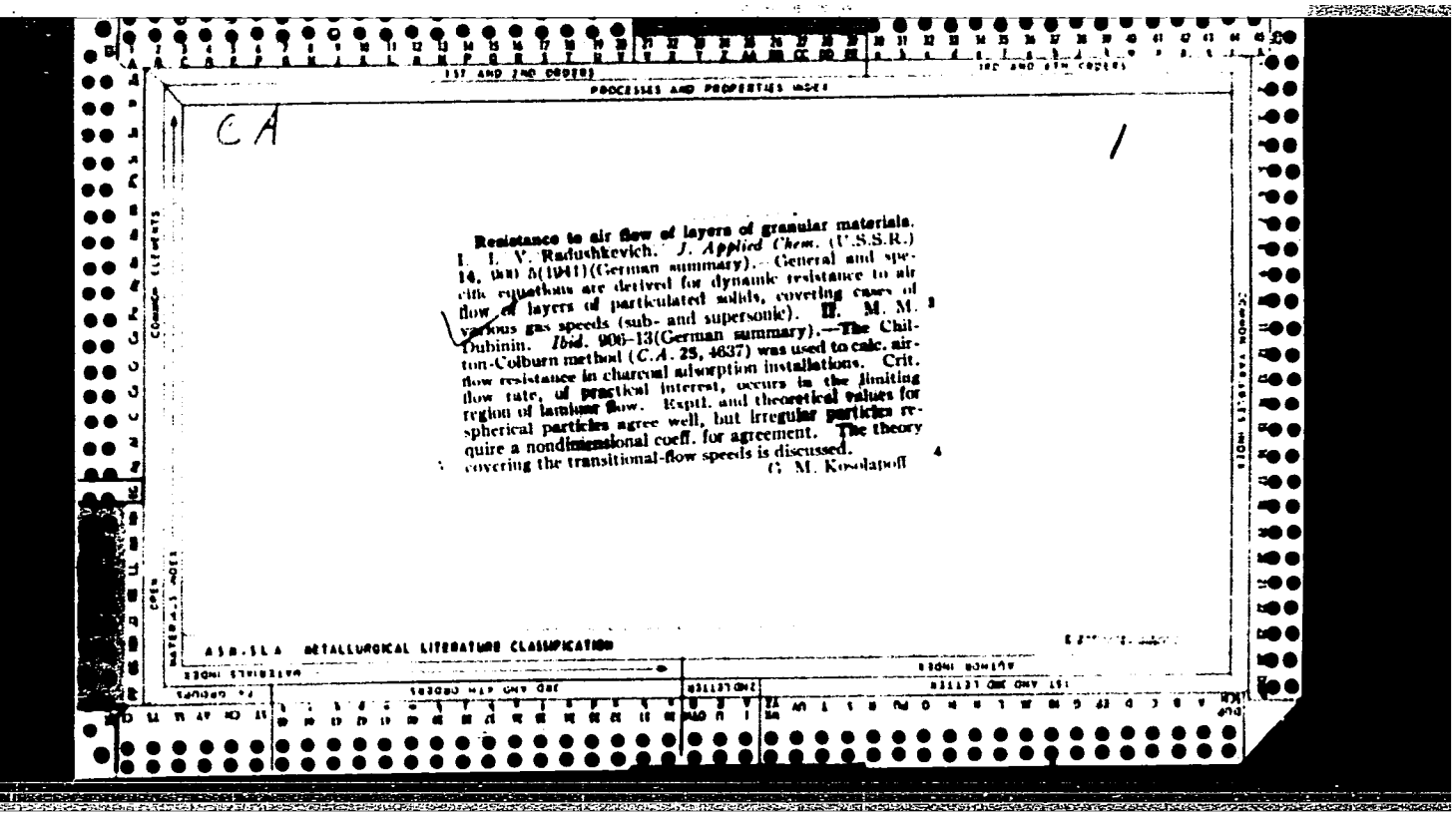
F. H. Rathmann

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

FADUSHKEVICH, I. V. (No affiliation given)

"A New Method of Determining the Mobility and Radius of Smoke Particles," Zhur. Fiz. Khim., 13, No. 9, 1939. Received 16 April 1939.

Report U-1618, 3 Jan. 1952



CA

1

Resistance to air flow of layers of granular materials. L. L. V. Radushkevich. *J. Applied Chem.* (U.S.S.R.) 14, 111 5(1941)(German summary).—General and specific equations are derived for dynamic resistance to air flow of layers of particulated solids, covering cases of various gas speeds (sub- and supersonic). M. M. 3
Ibid. 906–13(German summary).—The Chilton-Colburn method (*C.A.* 25, 4637) was used to calc. air-flow resistance in charcoal adsorption installations. Crit. flow rate, of practical interest, occurs in the limiting region of laminar flow. Expti. and theoretical values for spherical particles agree well, but irregular particles require a nondimensional coeff. for agreement. The theory covering the transitional-flow speeds is discussed. 4
G. M. Kosolapoff

[illegible] M. V.

Feb 1947

USSR/Chemistry - Adsorption
Chemistry - Charcoal, Activated

"The Characteristic Curve Equation for Active Charcoals," M. M. Dubinin, Mem, Acad Sci USSR; L. V. Radushkevich, Lab Sorption Processes, Inst Phys Chem, Acad Sci USSR, 3 pp

"Dk Acad Sci" Vol LV, No 4

Solution of adsorption potential is distinct from surface of adsorbent can be used analytically in simple cases, and cannot be used for industrial adsorbents which are porous bodies of complex structure. Polanyi's theory suggests use of characteristic curve of adsorbent. Authors attempt to describe these curves by a well-founded equation, in case of porous bodies, especially active charcoals. Submitted, 9 Dec 1946.

[illegible] T2?

CM

2

Theory of dynamics of adsorption on a real particulate ad
sorbent L. V. Radushkevich (K. Voroshilov Military
Acad., Leningrad) *Doklady Akad. Nauk S.S.S.R.* 57,
571-4(1947).—Theoretical discussion of the process of ad
sorption of a gas passing through a layer of granular ad
sorbent, making use of the Einstein-Fokker equation for
summation of individual transfers in irregularly packed
aggregate. An equation is derived and is confirmed in
general terms by following interferometrically the adsorp
tion of H_2O and CCl_4 vapors on activated charcoal.
M. Boudart

CA

2

Sorption and structure of active carbons. VII. The potential theory of adsorption and the structure of active carbons. L. V. Radushkevich (Acad. Sci. U.S.S.R., Moscow). *Zhur. Fiz. Khim.* **23**, 1410-20 (1949); cf. *C.A.* **44**, 1383*d*. The rule $w = w_0 e^{-kε^2}$ (w is the liquid vol. of vapor adsorbed at the adsorption potential $ε$, w_0 is the max. vol. adsorbed, and k is a const.) is accounted for if $f(ε) = (2k\ \rho b)^{1/2} e^{-kε^2}$, $f(ε)$ is proportional to the probability of the adsorption potential being between $ε$ and $ε + dε$, ρ is the d. of the adsorbed liquid, and $b = \sigma r$. r is the vol. of a pore, and the mean adsorption potential $ε$ in the pore is assumed to be inversely proportional to r. The r of the carbons studied earlier varies within a narrow range; apparently, the vol. of micropores is not accidental but depends on the mol. structure of the adsorbent. J. J. Bikerman

Lab. Sorption Processes, Inst. Physical Chemistry

CA

The structure of sorbents determined by means of the electron microscope L. V. Radushkevich and V. M. Luk'yanovich (Acad. Sci. U.S.S.R., Moscow). *Zhur. Fiz. Khim.* 24, 21–42 (1950).—The sorbents were deposited on films from suspensions (suitable for Al_2O_3 and SiO_2) or from dust or rubbed in a film-forming material. Over 1000 specimens of active C were studied. Com. specimens all give similar pictures but different spots of a specimen have different structures, i.e., active C is not uniform. The dimensions of the visible pores in sugar charcoal increased when the total pore vol. was increased by longer heating. SiO_2 gels (12 specimens were studied) belonged to one of 3 classes: (a) transparent SiO_2 gels, mechanically strong, showed no pores and were similar to quartz fragments, (b) gels consisting of crystals 500–1000 A. the pores between which had diams. at 100–600 A.; and (c) intermediate structures. Generally, electron microscope results agreed with adsorption data. J. J. Bikerman

(A

2

Mechanism of the aging of a vanadium pentoxide sol. V. V. Nemtsova, L. V. Radushkevich, V. M. Luk'yanovich, and K. V. Chmutov. *Doklady Akad. Nauk S.S.S.R.* 77, 297–9(1951).—Particle size distribution curves were constructed from electron-microscopic measurements of 200–250 particles of V_2O_5 hydrosols prepd. by the action of 10% HCl on NH_4 metavanadate, and allowed to stand for different lengths of time. During the 1st few days the sols are practically monodisperse, with 0.2–0.4 μ particles predominating. After 1 month, the sol becomes strongly polydisperse, with the max. length attaining 2–3 μ. After several months, most particles are several μ long, and after 3 years the length attains 25–30 μ. In an 8-day-old sol, allowed to stand for 27 more days after addn. of a 5% gelatin soln. (in an amt. sufficient to produce a gel), the growth was insignificant, and most particles remained at a length of 0.8 μ, in contrast to the strong growth and increase of dispersity observed in the same length of time in a sol without gelatin. Consequently, the growth process essentially over skew oriented coagulation. The same 8-day sol was placed, in a collodion bag, in a satd. true soln. of V_2O_5. In 4 more days the particles grew to the same size as in a blank 35-day sol. Consequently, crystn. from true soln. also plays a role in the growth of the particles. However, in a normal sol, the amt. of V_2O_5 in true soln. is small, and the growth must be due mainly to coagulation. N. Thon

VELICHKO, M.V.; RADESHKEVICH, L.V.

Properties of a hydrodynamic stream flowing around tiny stationary obstacles and the effectiveness of the capture of aerosol particles. Dokl. AN SSSR 154 no.2:415-418 Ja'64. (MIRA 17:2)

1. Institut fizicheskoy khimii AN SSSR. Predstavleno akademikom M.M. Dubininym.

RADUSHKEVICH, L.V.

Capillary condensation of vapors in highly disperse s[ystems]. I. Calculation of the capillary condensation in t[he] neighborhood of the contact points of spherical particle[s]. L. V. Radushkevich (Inst. Phys. Chem., Acad. Sci. U.S.S.R., Moscow). *Izvest. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 1952, 1008–20; cf. *C.A.* 47, 6734*f*.—Capillary condensation around the point of contact between 2 spheres is treated on the basis of the Thomson-Kelvin equation relating the radii of curvature r and r' of the meniscus with the surface tension σ, the mol. vol. V, and the relative pressure $p_r = p/p_s$, in the form $(1/r) + (1/r') = RT \ln p_r/\sigma V = 2/C$. Complete wetting is assumed. In the limiting case $p_r = 1$, i.e. at satn., $2/C = 0$; the meniscus surface is shown to be a catenoid, and the vol. of condensed liquid, $v = (2/3)\pi R^3 \times 0.2094$, is proportional to the vol. of the spheres of radius R and does not depend on the nature of the liquid and vapor. At any $p_r < 1$, it is shown that the meniscus is a trochoid; analysis leads to a functional relation between the dimensionless parameter $\beta = C/R$ and the dimensionless parameter $x = r_1/R$, where r_1 is the min. distance of the trochoid from the point of contact of the 2 spheres. With increasing β, i.e. with increasing p_r, the relative distance x of the middle of the meniscus from the point of contact first increases rapidly, then increasingly more slowly, and tends to level off to a const. value, corresponding at the limit to $p_r = 1$. The vol. of condensed liquid v is expressed by $v = (2/3)\pi R^3 U$; the function U is computed and tabulated for different values of β. At $p_r = 1$, $U = 209.4 \times 10^2$, and the numerical value of v becomes identical with that derived for complete satn. The magnitude U, which represents 4 times the relative vol. of the condensed liquid, is a universal function of β, independent of the material consts. Numerical values of U and v are computed and tabulated, as functions of p_r from 0.5 to 1.0, for the adsorption of C_6H_6 vapor on spheres of $R = 1 \times 10^{-6}$, 5×10^{-6}, 1×10^{-5}, and 5×10^{-5} cm. The fraction of the vol. of the adsorption cell occupied by the condensed liquid is always small and attains, at the limit, some 5%. It decreases rapidly with increasing R, whereas the vol. of liquid sorbed increases sharply with increasing vapor pressure, v increases at first slowly, then very rapidly, particularly with larger spheres.

N. Thon

RADUSHKEVICH, L. .

May/Jun 52

USSR/Chemistry - Adsorbents

"Natural Adsorbents of the Far East. Part I. Electron-Microscopic Investigation of Natural Adsorbents," V. T. Bykov, V. M. Luk'yanovich, L. V. Radushkevich, Inst of Phys Chem, Acad Sci USSR

"Iz Ak Nauk, Otdel Khim Nauk" No 3, pp 405-409

Ash tuffs and their weathering products, decomp tuff agglomerates of old quaternary volcanoes, bentonite clays, and diatomites were investigated under the electron microscope and their adsorption qualities were detd. The samples used in the test are identified only by the general classification given above and by numbers; their exact place of origin is not indicated.

PA 22C74

USSR/Chemistry - Catalysts Jan 52

"The Structure of Carbon Formed in the Decomposition of Carbon Monoxide on an Iron Catalyst," L. V. Radushkevich, V. M. Luk'yanovich, Inst of Phys Chem, Moscow, Acad Sci USSR

"Zhur Fiz Khim" Vol XXVI, No 1, pp 88-95

On the basis of electronmicroscopic investigation of the shape of carbon particles, assumes that fibrils (presumably consisting of carbides) observed under the microscope are formed 1st, and that these fibrils get thicker due to the deposition of graphite. The presence of double, interwoven fibrils was observed.

211T43

RADUSHKEVICH, L. V.

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RADUSHKEVICH, L. V.

Chemical Abst.
Vol. 48 No. 9
May 10, 1954
General and Physical Chemistry

(5)

Electron-microscopic study of coagulation of vanadium oxide sols with electrolytes. A. V. Dumberg, V. M. Luk'yanovich, V. V. Nemtsova, L. V. Radushkevich, and K. V. Chmutov. *Doklady Akad. Nauk S.S.S.R.* 85, 369–72 (1952); cf. *C.A.* 47, 9717*i*.—Eight-months-old V_2O_5 sols (2.3 g./l.) were coagulated with KCl (final concn. 0.1*N*) and shaken vigorously in a large vol. of water. From the resultant suspension prepns. were made for electron-microscopic observations. Three photographs are given. Manual shaking results in partial peptization, and the threads of V_2O_5 coalesce into braids. More vigorous mech. or ultrasonic agitation produces complete peptization, and the braids break up into fine threads with only partial coalescence. Under certain conditions, especially with high electrolyte concns., surprising results are obtained—the braids break up and form "droplets." The concn. of electrolyte necessary to initiate "droplet" formation depends on the cation; in the order of increasing effectiveness: Li^+, Na^+, K^+, Cs^+; or Li^+, Ca^{++}, Ce^{+++}. Tentative assumptions are made to explain "droplet" formation. I. Bencowitz

11-9-54

[illegible], A. V. - LUK'YANOVICH, V. M. - NEMTSOVA, V. V. - KASUSHKEVICH, L. V. - [illegible], V. V.

Vanadium Pentoxide

Investigation of coagulation of V_2O_5- sols by electrolytes with the aid of an electron microscope. Dokl. AN SSSR 85 no. 2, 1952.

Monthly List of Russian Accessions, Library of Congress, November 1952, UNCLASSIFIED.

USSR.

Electron-microscopic study of colloidal objectives by means of development. A. V. Bromberg, V. M. Lukyanovich, V. V. Nemtsova, L. V. Radushkevich, and K. V. Chmutov. *Doklady Akad. Nauk S.S.S.R.* 87, 81–4(1952); cf. *C.A.* 47, 9717*i*.—The method of development (cf. *C.A.* 46, 1842*b*) as a means of detecting, with the electron-microscope, anisotropic structures of colloidal prepns. is further demonstrated with $Zn(OH)_2$ hydrosols (I) and with dil. solns. of tobacco mosaic virus (II). Colloidal Ag formed by reducing 0.05*N* $AgNO_3$ in I with 1 drop of 1% hydrazine is condensed at the sharp edges with none on the surface of the plates of I. To a lesser degree this is true of Au formed by reducing 0.2% $AuCl_3$ with 1 drop of 1% NH_2OH-HCl. Because of the opacity of I the dry prepn. on the cellulose film is treated with a drop of 0.01*N* HCl, the liquid phase blotted off with strips of filter paper, washed with H_2O, and dried. The outlines of I thus lost are observed by preliminary inspection before the acid treatment. Colloidal Ag formed by reduction with hydrazine in II condenses at the sharp end-to-end joints of the rods of II. None condenses on the surface. Unlike with V_2O_5 hydrosols (cf. *C.A.* 46, 1331*f*), aging does not affect the distribution of Ag on II; this indicates not only anisotropy but also a more compact, impermeable (to Ag) structure of the rods of II. I. Bencowitz

KADANER, D.G.; LUK'YANOVICH, V.M.; RAIUSHKEVICH, L.V.

Adsorption and capillary condensation of vapors on nonporous carbon black. Doklady Akad.Nauk S.S.S.R. 87, 1001-4 '52. (MLRA 5:12)
(CA 47 no.14:6734 '53)

The Committee on Stalin Prizes (of the Council of Ministers USSR) in the fields of science and inventions announces that the following scientific works, popular scientific books, and textbooks have been submitted for competition for Stalin Prizes for the years 1952 and 1953. (Sovetskaya Kultura, Moscow, No. 22-40, 20 Feb - 3 Apr 1954)

Name	Title of Work	Nominated by
[illegible], K.V. Brechkin, A.V. [illegible], V.V. [illegible], [illegible]. [illegible]vich, L.V.	"Investigation by Electron-[illegible] of the Fine Structure and Properties of Colloids"	Institute of Physical [illegible], Academy of Science[illegible] USSR

SO: W-30644, 7 July 1954

RADUSHKEVICH, L.V.

Electron-microscopy of highly dispersed systems. V. Af. Luk'yanovich and L. V. Radushkevich. *Metody Issledovaniya Struktury Vysokodispersnykh i Puristykh Tel., Akad. Nauk S.S.S.R., Trudy Soveshchaniya* 1951, 37-46(1953).—Electron-microscopic photographs are shown and discussed as follows: (1) artificial graphite contg. 8.5% FeO, (2) carbon blacks from carbohydrates, graphite, and CO, (3) cuprene, (4) charcoal from sugar, (5) silica gels, (6) $BaSO_4$ and $SrSO_4$. Examples are also shown of destruction caused by the electron beam in materials investigated, such as (a) KCl crystals, (b) $BaSO_4$, (c) chrysotile. Also shown are pictures of natural adsorbents such as diatomaceous earth, abrasive products, sols of Ag, V_2O_5, VO_2 + Au (neg. and pos.), and V_2O_5 treated with $AgNO_3$ and NaH_2. S. P.

BROMBERG, A.V.; LUKYANOVICH, V.M.; NEMTSOVA, V.V.; RADUSHKEVICH, L.V.; CHMUTOV, K.V.

Electron-microscopic study of vanadium pentoxide sols. Zhur. Fiz. Khim. 27, 379-88 '53. (MLRA 6:5)
(CA 47 no.19:9717 '53)

USSR

Electron microscope studies of the form of the continuous pores of activated carbons from sugar. V. M. Luk'yanovich and L. V Radushkevich. *Doklady Akad. Nauk S.S.S.R.* 91, 585–7 (1953).—By continuous pore is meant an uninterrupted canal of minute diam., passing all the way through a material particle. Carbons made from sugar and activated by inorg. addns. have adsorption properties that suggest the presence of continuous pores and, at the same time, such carbons are easy to prep. for observation under the electron microscope. Three sets of photographs show: (1) (a) sugar coke at × 13,400; (b) part of (a) at × 47,000 with a clear case of continuous pore; (2) three prints of sugar carbons × 47,000; (3) stereoscopic electron microscope photograph of sugar carbon at × 11,000. While the continuous pores are said to have dimensions of the order of 10^{-4}–10^{-5} cm., adsorption measurements indicate that activated sugar coke contains a large no. of micropores with diams. of the order of 10^{-7} cm. V. H. Gottschalk

RADUSHKEVICH L.V

29(6) p3 PHASE I BOOK EXPLOITATION SOV/1408

Sovershchaniye po metodam issledovaniya struktury vysokodispersnykh i poristykh tel. 2d, Leningrad, 1956.

Metody issledovaniya struktury vysokodispersnykh i poristykh tel; trudy vtorogo soveshchaniya (Methods of Investigating the Structure of Highly Disperse and Porous Bodies; Transactions of the Second Conference) Moscow, Izd-vo AN SSSR, 1958. 294 p. 2,000 copies printed.

Sponsoring Agencies: Akademiya nauk SSSR. Institut fizicheskoy khimii and Institut khimii silikatov.

Resp. Ed.: Dubinin, M.M., Academician; Ed. of Publishing House: Rasumova, L.L.; Tech. Ed.: Markovich, S.M.

PURPOSE: This book is intended for scientists, teachers and advanced students interested in the structural analysis of highly disperse and porous bodies.

COVERAGE: This collection contains reports by members of various Soviet institutions of higher education: Institute of Physical Chemistry, AS UkrSSR; Institute of Chemistry, AS Georgian SSR; Far Eastern Branch, AS USSR; Georgian Scientific Research Institute for Petroleum; State Optical Institute; Leningrad Technological Institute; Moscow and Leningrad State Universities; Far Eastern Polytechnic Institute; "Aerophysical" Institute, and others. Introductory remarks were made by Professor M.A. Porapov, Director of the Institute of Silicate Chemistry. Apart from reports under the four subject divisions (see Table of Contents), the collection includes discussions, considerations and proposals adopted at the close of the conference.

TABLE OF CONTENTS:

Card 3/3

62-58-3-4/30

AUTHOR: Radushkevich, L. V.

TITLE: An Investigation of the Capillary Condensation of Vapors in High-Dispersed Systems (Issledovaniye kapillyarnoy kondensatsii parov v vysokodispersnykh sistemakh). Communication 2. Evaluation of Some Approximate Calculations of Capillary Condensed Volumes (Soobshcheniye 2. Otsenka nekotorykh priblizhennykh raschetov kapillyarno-kondensirovannykh ob"yemov)

PERIODICAL: Izvestiya Akademii Nauk SSSR,Otdeleniye Khimicheskikh Nauk, 1958, Nr 3, pp. 285-289 (USSR)

ABSTRACT: With regard to the calculation of capillary-condensed volumes of liquids near the point of contact of two equal spherical particles the author in the preceding paper also discussed the thermodynamic equilibrium between vapor and liquid which exists between 2 contacting spheres. All approximate calculations already performed by the author are physically founded and more precise than those hitherto existing. The author quotes a number of authors, Leybenzon (calculation of the mineral oil volume), Higuti and Utsugi (approximate calculation of the volume of liquid in connection with the interpretation of

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An Investigation of the Capillary Condensation of Vapors in 62-58-3-4/30
High-Dispersed Systems. Communication 2. Evaluation of Some Approximate
Calculations of Capillary Condensed Volumes

the isothermal lines of vapor adsorption), Davies and Lykov. In all works quoted by the author it is assumed as a general principle that the meniscus profile of the liquid between contacting particles represents the arc of the periphery. This assumption leads to a simplification of the calculations. In the present paper it is shown, however, that approximate calculation of liquid volumes forming near the point of contact of two spheres in capillary condensation are by no means reliable (when it is assumed that the meniscus profile is the arc of the periphery). For the core of the spheres with equal radius the deviations of individual volume values may amount to 25-30% in the best approximation calculations (when the mean radius of the meniscus curvature or the mean surface curvature are introduced). In some other simplifications the deviation may still be higher . (See formulae 1-10). There are 1 table and 7 references, 4 of which are Soviet.

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute for Physical Chemistry, AS USSR)

SUBMITTED: January 20, 1957

Card 2/2

62-58-4-3/32

AUTHOR: Radushkevich, L. V.

TITLE: Investigation of the Vapor Capillary Condensation in Highly Dispersed Systems (Issledovaniye kapillyarnoy kondensatsii parov v vysokodispersnykh sistemakh). Communication 3: Capillary Condensation in Cells of Two Contacting Spheres With Different Radius (Soobshcheniye 3: Kapillyarnaya kondensatsiya v yacheykakh iz dvukh kontaktiruyushchikh sharov raznogo radiusa)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Khimicheskikh Nauk, 1958, Nr 4, pp. 403 - 410 (USSR)

ABSTRACT: The authors calculated already earlier the liquid volumes forming in the capillary vapor condensation near the contact point of two spherical particles of the same radius. In this paper they now give the volume calculations of the liquids for the case when the contacting particles have a different radius. This calculation is necessary for the more exact approximation to real dispersed systems. The solution of this more general problem is achieved according to the same methods as in the previous communication. In

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62-58-4-3/32

Investigation of the Vapor Capillary Condensation in Highly Dispersed Systems. Communication 3: Capillary Condensation in Cells of Two Contacting Spheres With Different Radius

In this paper the author reports on the calculation of the capillary condensed volumes for the cell consisting of two spheres (of different radius). In the second chapter the author discusses the general case of the capillary condensation of vapors in cells consisting of two spheres of different radius. The results obtained show that the variety of volumes of the spherical particles exercises an essential on the liquid volume near the contact point. It was found that the difference in size of the contacting spheres leads up to 15% increase of the liquid volume. There are 2 figures, 4 tables, and 2 Soviet references.

Card 2/3

62-58-4-3/32

Investigation of the Vapor Capillary Condensation in Highly Dispersed Systems. Communication 3: Capillary Condensation in Cells of Two Contacting Spheres With Different Radius

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR
(Institute for Physical Chemistry, AS USSR)

SUBMITTED: January 2o, 1957

AVAILABLE: Library of Congress

1. Capillary condensation--Analysis 2. Dispersed systems --Applications 3. Spheres--Applications

Card 3/3

RADUSHKEVICH, L. V.; TSITSISHVILI, G. V.; YERMOLENKO, N. F.; DUBININ, M. M.; BERING, B. P.; SERPINSKIY, V. V.; LUK'YANOVICH, V. M.

"The adsorption from vapors and liquids."

report presented at the Fourth All-Union Conference on Colloidal Chemistry, Tbilisi, Georgian SSR, 12-18 May 1958 (Koll zhur, 20,5, p 677-9, '58, Teubman, A.B)

76-32-2-9/38

AUTHOR: Radushkevich, L. V. (Moscow)

TITLE: The Theory of the Deposition of Particles From a Gas Flow on an Isolated Cylinder in Connection With the Filtering Process (Teoriya osazhdeniya chastits iz gazovogo potoka na izolirovannom tsilindre v svyazi s protsessom fil'tratsii aerozoley)

PERIODICAL: Zhurnal Fizicheskoy Khimii, 1958, Vol. 32, Nr 2, pp. 282-290 (USSR)

ABSTRACT: In the theoretical analysis given here the mode of action of two factors is investigated: diffusion and direct convection. This corresponds to the most simple filtering process of highly disperse aerosols in those cases where the neglecting of the mechanism of inertia and sedimentation is correct. The main purpose of investigation was the checking of the dependence of the effectiveness of deposits on the measurements of aerosol particles. This, because this dependence forms the most characteristic feature of fiber-filters. The problem formed here consists in finding the number of particles de-

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The Theory of the Deposition of Particles From a Gas Flow on an Isolated Cylinder in Connection With the Filtering Process

positing in the steady process per unit time per unit of cylinder length, in case that the radius of the particle and that of the cylinder, the velocity of the non-disturbed flow, the partial concentration N_o of the aerosol (at a distance from the cylinder) and the properties of the parameters characterizing the dispersion medium are given. The equation (7) for the effectiveness of the deposition η is deduced using the differential equation for convective diffusion in a flow. This formula gives the general solution of the problem of the deposition of particles from a flow on a cylinder. In the case of a viscous gas flow, with small Reynold's numbers and with small values of the ratio of r/R (radius of the particles/radius of the cylinder) the effectiveness of the deposition, as function r, shows a minimum which coincides with most experimental data on aerosol filtering. It is shown that with particles with finite geometrical dimensions the whole process can be expressed as a common mode of effect of diffusion and direct convection. Different from Langmuir's theory (Reference 2) both mechanisms have an inseparable effect on the course of the process in the computations carried out here. However, the pure

The Theory of the Deposition of Particles From a Gas Flow on an Isolated Cylinder in Connection With the Filtering Process

diffusion deposition for the range of small dimensions of particles can be separated. It is pointed out that the diffusion and the geometric dimensions of the particles only determine the lower limit of the possibility of the deposition of particles on a cylinder within the practically important dispersion range. Thus the given method of computation with a minimum number of assumptions apparently leads to an understandable explanation of the mechanism of deposition, although it does not completely solve the complicated problem of aerosol filtering. There are 1 figure, 1 table, and 27 references, 5 of which are Soviet.

ASSOCIATION: Akademiya nauk SSSR, Institut fizicheskoy khimii (AS USSR, Institute for Physical Chemistry)

SUBMITTED: October 1, 1956

Card 3/3 1. Particles (Airborne)--Control systems 2. Particulate filters --Analysis 3. Mathematics

20-119-3-38/65

AUTHOR: Radushkevich, L. V.

TITLE: The Adsorption Potential Near Spherical Particles of Colloidal Size (Adsorbtsionnyy potentsial vblizi sfericheskikh chastits kolloidnykh razmerov)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 119, Nr 3, pp. 530 - 532 (USSR)

ABSTRACT: First the author gives a short general survey on the state of the problem. The author first investigates the adsorption field in the distance d from the surface of a particle with the diameter $\delta = 2r$. The most practical performance of this computation is comparing the adsorption potential P of the particle with the value of this potential in the same distance for a plane surface (then this potential is equal to P_∞). Also a priori can be asserted $P < P_\infty$ and for this inequality two reasons exist: The influence of the curvature of the surface and the finite dimensions of the particle. The computation, which is suggested here, refers to particles of a diameter of from 100 to 200 Å, which is the case with silica gels, soot, etc. For the estimation of the possibility of the production

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The Adsorption Potential Near Spherical Particles of Colloidal Size

of polymolecular layers the potential was computed in distances of 3-7 radii of the adsorbate molecule from the surface. On these conditions the distance d is for several times greater than the distance between the molecules of the adsorber and in the computation of the adsorption potential without any noticeable error the summation can be replaced by an integration. For the adsorption potential explicitly an expression is written down, and specialized for a spherical particle. A table contains the values of various coefficients, which occur in the here derived formulae. These coefficients considerably differ from the value 1(which corresponds to a plane surface). Also the contributions of the quadropole terms and the components of the repulsion are small compared with the contribution of the dipole term and therefore can be neglected. Anyway above a single particle in distances of 2 - 3 molecular layers a diminuition of the adsorption potential by 10 - 20% compared with the corresponding value above a plane surface has to be considered. In the case of tangent particles of the

The Adsorption Potential Near Spherical Particles of Colloidal Size

same size the potentials of the single particles are superimposed additively. In the case of pairs of tangent particles the potentials on the joint tangent and in equal distances from both particles simply are doubled. At groups of three particles, which are packed as tight as possible, the adsorption potential in the case of small particles is $P_{1,2,3} = 3P$. Finally

the author thanks the member of the Academy M. M. Dubinin for his interest in this work. There are 1 table and 4 references.

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute of Physical Chemistry, AS USSR)
PRESENTED: November 2, 1957, by M. M. Dubinin, Member, Academy of Sciences, USSR
SUBMITTED: October 25, 1957
AVAILABLE: Library of Congress

PHASE I BOOK EXPLOITATION SOV/5338

Bazhenkevich, Leonid Viktorovich

Kurs statisticheskoy fiziki (A Course in Statistical Physics) Moscow, Uchpedgiz, 1960. 347 p. 7,000 copies printed.

Ed.: Ya. L. Khait; Tech. Ed.: M. I. Smirnova.

PURPOSE: This textbook is intended for physics students at pedagogical institutes and may also be used by students of statistical physics at other vuzes.

COVERAGE: This course in statistical physics conforms to the program in force at pedagogical institutes and other vuzes, and discusses in abbreviated form the fundamentals of statistical physics. Main attention is given to classical statistics, though the most important problems in quantum statistics are also dealt with. A treatment of the fundamental Gibbs methods precedes the discussion of the elementary kinetic theory of gases and the analysis of the statistical meaning of the second law of thermodynamics. The present work is based on a course given by the author over a period of nine years at the Moskovskiy gorodskoy pedagogicheskoy institut imeni V. P. Potemkina (Moscow Municipal Pedagogical Institute imeni V. P. Potemkin). Those parts of the theory of

Card 1/7

RADUSHKEVICH, L.V.

Capillary condesnation of vapors in highly dispersed systems. Report No.4: Capillary condensation in systems counting of large numbers of particles in contact. Izv.AN SSSR.Otd.khim.nauk no.5:756-762 My '61. (MIRA 14:5)

1. Institut fizicheskoy khimii AN SSSR.
(Water vapor) (Capillarity) (Condensation)

RADUSHKEVICH, L.V.

Capillary condensation of vapors in highly dispersed systems. Report 5: Analysis of joint adsorption and capillary condensation process in the systems consisting of particles in contact. Izv.AN SSSR.Otd.khim.nauk no.6:984-988 Je '61. (MIRA 14:6)

1. Institut fizicheskoy khimii AN SSSR.
(Adsorption) (Condensation)

PADUSHKEVICH, L.V.; KOLGANOV, V.A.

Capillary-retained liquid in disperse systems consisting of particles in contact. Ko.. zhur. 23 no.1:86-94 Ja-F '61. (MIRA 17:2)

1. Institut fizicheskoy khimii AN SSSR, Moskva.

RADUSHKEVICH, L.V.

Present state of the theory of aerosol filtration (reply to the critical remarks of G.L. Natanson and E.N. Ushakova). Zhur. fiz. khim. 35 no.2:467-470 F '61. (MIRA 16:7)

1. Institut fizicheskoy khimii AN SSSR.
(Aerosols)

RADUSHKEVICH, L.V.; LEONT'YEV, Ye.A.; KOLGANOV, V.A.

Semiautomatic device for obtaining particle size distribution hystograms in disperse systems. Zhur. fiz. khim. 35 no.5: 1153-1155 My '61. (MIRA 16:7)

1. Institut fizicheskoy khimii AN SSSR.
(Particle size determination)

RADUSHKEVICH, L.V. (Moskva)

New method for determining the efficiency of the deposition of aerosols from a flow on a stationary cylinder. Zhur.fiz. khim. 35 no.8:1870-1873 Ag '61. (MIRA 14:8)

1. Institut fizicheskoy khimii AN SSSR.
(Particle size determination)
(Aerosols)

RADUSHKEVICH, L. V.; KOLGANOV, V. A.

"Study on the deposition of high disperse aerosols from gas flow on ultrafine cylinders"
To be presented at the First National Conference on aerosols - Liblice, Czechoslovakia, 8-13 Oct 1962

Inst. of Physical Chemistry, Acad. of Sci. USSR, Moscow

RADUSHKEVICH, L.V.; KOLGANOV, V.A.

Experimental studies of the deposition of aerosols from a stream on thin single fibers. Report No.1: Deposition of polydispersed aerosols of tungsten trioxide. Izv. AN SSSR Otd.khim.nauk no.1: 23-31 Ja '62. (MIRA 15:1)

1. Institut fizicheskoy khimii AN SSSR.
(Tungsten oxide) (Aerosols)

RADUSHKEVICH, L.V.

Theory of the filtration of polydispersed aerosols out of a steady flow. Izv.AN SSSR,Otd.khim.nauk no.7:1190-1197 Jl '62. (MIRA 15:7)

1. Institut fizicheskoy khimii AN SSSR.
(Aerosols)

RADUSHKEVICH, L.V.; VELICHKO, M.V.

Theory of precipitation of highly dispersed aerosols from a flow on an ultrathin cylinder. Dokl. AN SSSR 146 no.2:406-408 S '62. (MIRA 15:9)

1. Institut fizicheskoy khimii AN SSSR. Predstavleno akademikom M.M. Dubininym.

MEDNIKOV, Yevgeniy Pavlovich; KADUSHKEVICH, L.V., doktor khim. nauk, prof., otv. red.; GUROV, K.P., red.izd-va; ASTAF'YEVA, G.N., tekhn. red.; VOLKOVA, V.V., tekhn. red.

[Accoustical coagulation and precipitation of aerosols] Akusticheskaia koaguliatsiia i osazhdenie aerozolei. Moskva, Izd-vo AN SSSR, 1963. 262 p. (MIRA 16:12)
(Aerosols) (Ultrasonic coagulation)

RADUSHKEVICH, L.V.

Nature of secondary processes in the filtration of aerosols. Report No.1: Simplest theory of coprecipitation of particles in a filter and colmatation kinetics. Izv.AN SSSR.Otd.khim.nauk no.3:407-414 Mr '63. (MIRA 16:4)

1. Institut fizicheskoy khimii AN SSSR.
(Aerosols) (Filters and filtration)

RADUSHKEVICH, L.V.

Kinetics of the formation and growth of aggregates on a solid obstacle from a flow of colloid particles. Koll.zhur. 26 no.2: 235-240 Mr-Ap '64. (MIRA 17:4)

1. Institut fizicheskoy khimii AN SSSR, Moskva.

RADUSHKEVICH, L.V.; KOLGANOV, V.A.

Method of evaluating aerosol filters by means of polydispersed aerosols. Zav. lab. 30 no.11:1365-1367 '64 (MIRA 18:1)

1. Institut fizicheskoy khimii AN SSSR.

RADUSHKEVICH, L.V.; KOLGANOV, V.A.

Use of drying oil fogs in studying filtration of aerosols.
Zhur. fiz. khim. 38 no.3:806-808 Mr '64. (MIRA 17:7)

[illegible] .V., KOLGANOV, V.A.

[illegible] ation of aerosol [illegible] with [illegible] (MIRA [illegible])
[illegible] Zhur. 27 no.1:95-10[illegible] Ja-F [illegible].

[illegible]. Institut fizicheskoy khimii AN SSSR, Moskva.

BAZAROV, I.P.; GERASIMOV, Ya.I.; KISELEV, A.V.; PREDVODITELEV, A.S.; RADUSHKEVICH, L.V.; SKURATOV, S.M.; TIKHOTSKIY, N.P.; CHMUTOV, K.V.; SHUBNIKOV, A.V.; SHULEYKIN, V.V.

Vladimir Ksenofontovich Semenchenko, 1894- ; on his 70th birthday. Zhur. fiz. khim. 39 no.5:1300-1301 My '65. (MIRA 18:8)

L 20342-66 EWT(1)/EWT(m)/EWP(j)/T DS/WW/JK/RM

ACC NR: AP6012074 SOURCE CODE: UR/0069/65/027/001/0095/0100

AUTHOR: Radushkevich, L. V.; Kolganov, V. A.

ORG: Institute of Physical Chemistry, AN USSR, Moscow (Institut fizicheskoy khimii AN SSSR)

TITLE: Study of aerosol filtration by means of a model filter

SOURCE: Kolloidnyy zhurnal, v. 27, no. 1, 1965, 95-100

TOPIC TAGS: polystyrene, filtration, aerosol

ABSTRACT: A design of a model filter was developed and tested for the purpose of studying aerosol filtration. The filter consists of a large number of sections, each containing from 500 to 1200 polymer fibers with a mean diameter of about 1.5 μ.

Experiments on the filtration of a polydisperse polystyrene aerosol led to the derivation of a relation between the differential breakthrough coefficients and the particle size. A maximum in this dependence was found for particles 0.2-0.3 μ at a flow rate of 0.4 cm/sec; this maximum shifted toward smaller particles as the flow rate increased.

Variation in the number of sections and in the degree of their filling, and also repeated applications of fibers by the same technique showed that model filters of this design give reproducible results.

Card 1/2 UDC: 541.182.21.3

L 20342-66

ACC NR: AP6012074

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A calculation of the efficiency of deposition on a single fiber with an average diameter of ~1.5 μ, based on the breakthrough coefficients obtained, showed that this efficiency remains virtually unchanged from a filling density of ~33 fibers per mm to a density of ~75 fibers per mm, i.e., it that it is independent of the mutual interaction of the neighboring fibers of the filter. The authors thank V. N. Pechenov and V. G. Sazonova for preparing the model and assembling the filters. Orig. art. has: 5 figures, 2 tables, and 3 formulas. [JPRS]

SUB CODE: 06, 11 / SUBM DATE: 15May63 / ORIG REF: 004 / OTH REF: 002

Card 2/2 BK

L 32822-66 EWT(1)/EWT(m)/T IJP(c) WW/RO/DS

ACC NR: AP6008089 (A) SOURCE CODE: UR/0076/66/040/002/0317/0321

AUTHOR: Radushkevich, L. V.

ORG: Institute of Physical Chemistry, Academy of Sciences SSSR (Institut fizicheskoy khimii Akademii nauk SSSR)

TITLE: The significance of linear diffusion in filtration of aerosols by layers of fibrous materials

SOURCE: Zhurnal fizicheskoy khimii, v. 40, no. 2, 1966, 317-321

TOPIC TAGS: aerosol, filtration, filter

ABSTRACT: Experiments on the study of the filtration of polydispersion aerosols by means of layers of fibrous materials have shown that the effectiveness of precipitation calculated for each individual fiber may not only be greater, but smaller than the effectiveness for an ideal filter made of identical fibers with a correct arrangement. The reasons for the discrepancies are analyzed. It is found from the investigation that the filtration of aerosols by means of solid layers is complicated by the presence of heterogeneities in the arrangement of the fibers, which in some cases leads to a drop in the efficiency of the layer compared to the efficiency of the ideal layer with correctly arranged layers. This circumstance does not make it possible to shift unconditionally in the calculations from the effectiveness found for individual isolated fibers to the effectiveness obtained from the experimental data for layers. Theoretically, the effect of the heterogeneity on the filtration process may be described as the mechanism of

UDC 543.183+543.544

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L 32822-66

ACC NR: AP6008089

linear diffusion in the layer, which is in agreement with direct statistical analysis proposed for the sorption in layers of granulated sorbents. The considerations given (which are valid for volumetric layers) make it possible to explain the observed decrease in the effectiveness as calculated for fibers as compared to the effectiveness for ideal fibers. Orig. art. has: 8 formulas.

SUB CODE: 07 / SUBM DATE: 20Dec64 / ORIG REF: 006 / OTH REF: 001

Card 2/2

ACC NR: AP6032281 SOURCE CODE: UR/0020/66/170/002/0375/0378

AUTHOR: [illegible]kevich, L. V.

ORG: Institute of Physical Chemistry, Academy of Sciences, SSSR (Institut fizicheskoy khimii AN SSSR)

TITLE: Filtration of aerosols with fibrous filters in the presence of electrical discharges on the fibers

SOURCE: AN SSSR. Doklady, v. 170, no. 2, 1966, 375-378

TOPIC TAGS: physical chemistry, aerosol, filtration, electric discharge

ABSTRACT: A mathematical treatment is presented of certain electrical phenomena in aerosol filtration. These phenomena are studied under varying conditions such as: small concentrations of a monodispersed aerosol, residual humidity of the air and moistness of the filter, secondary phenomena, dielectric properties of the fibers, discharge conditions, and current losses.
[WA-50; CBE No. 12]

SUB CODE: 07/ SUBM DATE: 30Dec65/ ORIG REF: 002/

Card 1/1 UDC: 541.182.2/3+542.67.047.5

ACC NR: AP6032281 SOURCE CODE: UR/0020/66/170/002/0375/0378

AUTHOR: Radushkevich, L. V.

ORG: Institute of Physical Chemistry, Academy of Sciences, SSSR (Institut fizicheskoy khimii AN SSSR)

TITLE: Filtration of aerosols with fibrous filters in the presence of electrical discharges on the fibers

SOURCE: AN SSSR. Doklady, v. 170, no. 2, 1966, 375-378

TOPIC TAGS: physical chemistry, aerosol, filtration, electric discharge

ABSTRACT: A mathematical treatment is presented of certain electrical phenomena in aerosol filtration. These phenomena are studied under varying conditions such as: small concentrations of a monodispersed aerosol, residual humidity of the air and moistness of the filter, secondary phenomena, dielectric properties of the fibers, discharge conditions, and current losses.
[WA-50; CBE No. 12]

SUB CODE: 07/ SUBM DATE: 30Dec65/ ORIG REF: 002/

UDC: 541.182.2/3+542.67.047.5

Card 1/1

L 9451-66

ACC NR: AP5022852 SOURCE CODE: UR/0375/65/000/009/0071/0075

AUTHOR: Radushkevich, R. B. (Captain)

ORG: none

TITLE: Repair operations outside the pressure hull of a submarine

SOURCE: Morskoy sbornik, no. 9, 1965, 71-75

TOPIC TAGS: safety harness, military training, military operation, ship navigation, SUBMARINE, SHIPBUILDING ENGINEERING

ABSTRACT: Considerations involved in making repairs outside the pressure hull of a submarine during a long cruise are discussed. Safety of the repair personnel is a major concern. The personnel should be carefully selected for their skill, discipline, and ability to handle themselves on wet decking. The repair party should be thoroughly briefed on the specific requirements of the repair operation, and simple but reliable communications should be established. The repair equipment, assembled before leaving home port, should include flashlights, protective clothing, safety line and harnesses, long hoses for the pneumatic tools, long cables for the welding units, etc. A team should be assembled in the compartment adjacent to the damaged section so as to render assistance and maintain communications. The executive officer usually exercises technical control, and the captain, stationed on the bridge, maintains contact with all groups and navigates the submarine so as to minimize the

Card 1/2

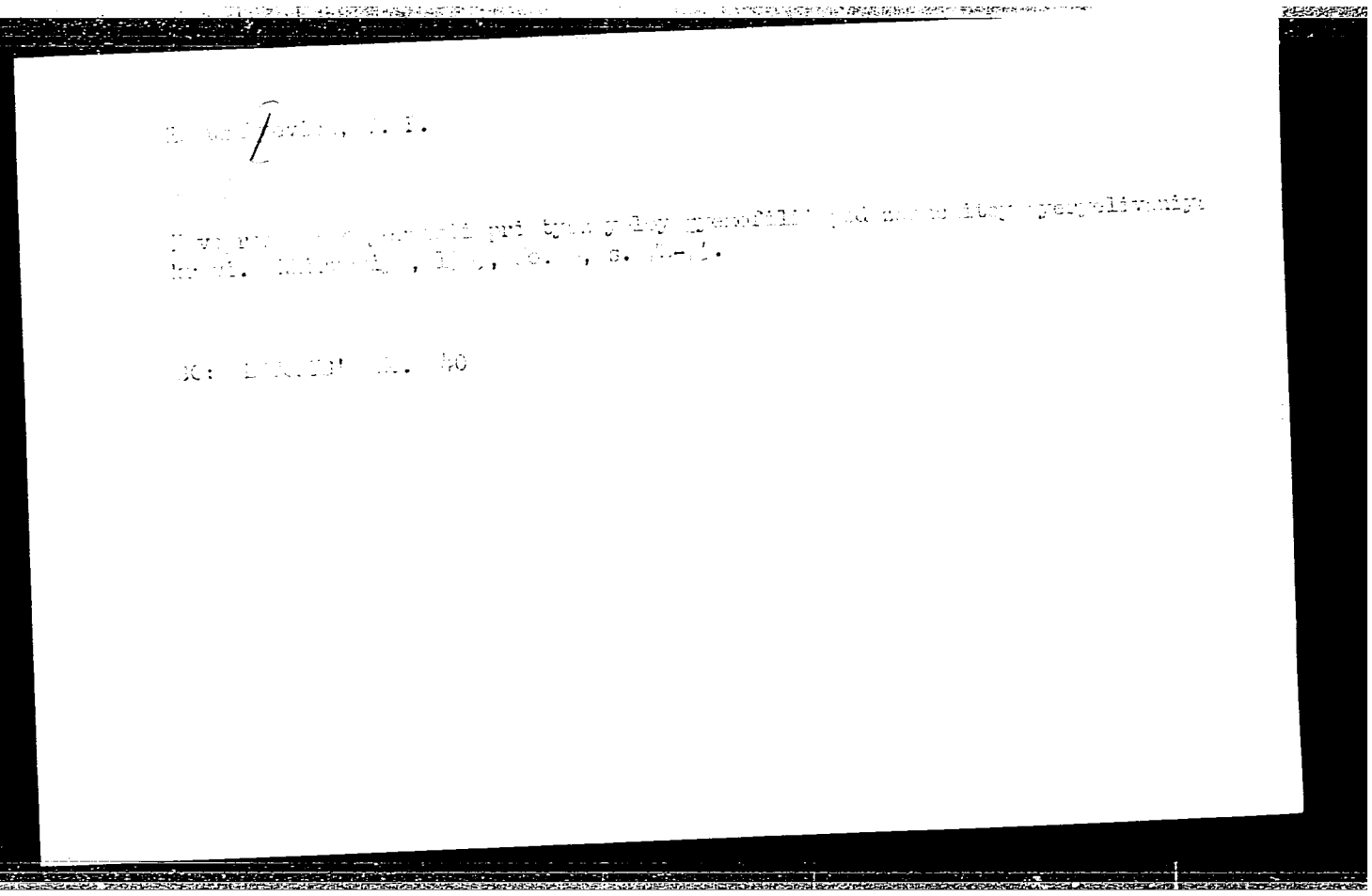
L 9451-66

ACC NR: AP5022852

water washing over the deck. Speed must be held to a minimum while maintaining steerage way, and operations at water temperatures lower than +10C must be limited to two hours per man, followed by a medical check.

SUB CODE: 13/ SUBM DATE: none

Card 2/2



[illegible], V. T.

Sep/Oct 51

USSR/Medicine - Blood Transfusion

"Effect of Blood Components on the Rate of Oxidation of Ascorbic Acid," F. T. Lukhenko, M. M. Priss, V. P. Radushkevich, Chair of Biochem, Novosibirsk Med Inst, and Novosibirsk Blood Transfusion Sta

"Biokhim" Vol XVI, No 5, pp 385-389

Citrates as compared with phosphates inhibit oxidation of ascorbic acid (I) in the presence of undestroyed erythrocytes and their hemolysates and in their absence. Whole blood, plasma, erythrocytes and their hemolysates, coverines and content of erythrocytes inhibit, but do not prevent oxidation of I. It is probable that in addn to catalase, amino acids, and sulfhydryl groups, blood proteins (particularly lipoid-protein complexes of erythrocyte coverings) play an essential role in stabilizing I in blood.

[illegible] 78

RADUSHKEVICH, V. P., prof.

Method of pressing the blood into the ascending aorta in clinical death and in marginal agonal states. Khirurgiia no.12:75-78 D '55 (MLRA 8:4)

1. Iz gospital'noy khirurgicheskoy kliniki (zav. prof. V. P. Radushkevich) Voronezhskogo meditsinskogo instituta.

(RESUSCITATION,
pressing of blood into asconding aorta in clin. death & marginal agonal states)

RADUSHKEVICH, V.P.

RADUSHKEVICH, V.P., prof.; KARYUKINA, A.T.

Results of surgery in acute cholecystitis [with summary in English]. Khirurgiia 33 no.11:74-79 N '57. (MIRA 11:2)

1. Iz gospital'noy khirurgicheskoy kliniki Voronezhskogo meditsinskogo instituta.
(CHOLECYSTITIS, surg.
indic. & results (Rus))

RADUSHKEVICH, V.P., prof. (Voronezh, Plekhanovskaya ul., d.19, kv.32)

Results of forced injection of blood and fluids into the arterial system in terminal states [with summary in English]. Vest.khir. 81 no.8:15-19 Ag '58 (MIRA 11:9)

1. Iz gospital'noy khirurgicheskoy kliniki (zav. - prof. V.P. Radushkevich) Voronezhskogo meditsinskogo instituta.

(BLOOD TRANSFUSION,
intra-arterial forced, in agonal states (Rus))
(INFUSIONS, PARENTERAL,
same (Rus))
(RESUSCITATION,
intra-arterial forced blood transfusion in parenteral infusion in agonal cond. (Rus))

RADUSHKEVICH, V.P., prof.

Direct massage of the heart in overall measures for resuscitation. Nov. khir. arkh. no.2:28-34 Mr-Ap '59. (MIRA 12:7)

1. Kafedra gospital'noy khirurgii (zav. - prof. V.P. Radushkevich) Voronezhskogo meditsinskogo instituta.
(HEART--SURGERY) (RESUSCITATION)

RADUSHKEVICH, V.P., prof. (Voronezh, ul.Plekhanovskaya, d.19, kv.32)

Oxygen apparatus KP-24 in medical practice. Nov.khir.arkh. no.3:106-107 My-Je '59. (MIRA 12:10)

1. Kafedra gospital'noy khirurgii Voronezhskogo meditsinskogo instituta.

(OXYGEN--THERAPEUTIC USE)
(MEDICAL INSTRUMENTS AND APPARATUS)

RADUSHKEVICH, V.P., prof. (Voronezh, ul. Plekhanovskaya, d.19, kv.32); VUL'F, N.N.

Local hypothermia in ischemic conditions of the extremities. Nov. khir.arkh. no.5:53-59 S-O '59. (MIRA 13:3)

1. Kafedra gospital'noy khirurgii (zaveduyushchiy - prof. V.P. Radushkevich) Voronezhskogo meditsinskogo instituta.
(HYPOTHERMIA) (EXTREMITIES (ANATOMY)--SURGERY)

RADUSHKEVICH, V.P. (Voronezh (obl.), ul.Plekhanovskaya, d.19, kv.32)

Plombage of the pleural cavity using porolon. Nov. khir. arkh. no.3:60-65 My-Je '60. (MIRA 15:2)

1. Klinika gospital'noy khirurgii (zav. - prof. V.P.Radushkevich) Voronezhskogo meditsinskogo instituta.
(PLASTICS IN MEDICINE) (PLOMBAGE (SURGERY))
(PLEURA--SURGERY)

RADUSHKEVICH, V.P., prof. (Voronezh, ul.Plekhanovskaya, d.19, kv. 32); KOSONOGOV, L.P.

Potentiated anesthesia in surgery. Nov. khir. arkh. no.5:37-44 S-O '60. (MIRA 14:12)

1. Kafedra fakul'tetskoy khirurgii (zav. - prof. V.P.Radushkevich) Voronezhskogo meditsinskogo instituta.
(ANESTHESIA)

RADUSHKEVICH, V.P., prof.; LISELEV, V.I., kand. med. nauk

Management of penetrating injuries of the chest in peacetime. Khirurgiia no.1:56-58 '63. (MIRA 17:5)

1. Iz gospital'noy khirurgicheskoy kliniki (zav. - prof. V.P. Radushkevich) Voronezhskogo meditsinskogo instituta.

RADUSHKEVICH, V.P., prof.; KOSONOGOV, L.F.; BONDARENKO, V.V.; VASHANTSEV, A.A.; SLIVKIN, A.V.; STARYKH, V.S.

Use of new Soviet ganglionic blocking preparations in surgical practice. Khirurgiia 39 no.7:13-19 Jl'63 (MIRA 16:12)

1. Iz kafedry gospital'noy khirurgii (zav. - prof. V.P.Radushkevich) Voronezhskogo meditsinskogo instituta.

ZINOVICH, A.M.; KOZLOVSKAYA, A.A.; RADUSHNOVA, T.A.

Composition and use of the anti-corrosive polydiene-bitumen mastic. Biul. tekh.-ekon.inform.Gos. nauch.-issl. inst. nauch. i tekh. inform. 18 no.6:8-9 Je '65. (MIRA 18:7)

RADUNSKAYA, I.

[redacted]

Water-jet cutters. IUn.tekh. 2 no.11:15-17 N '57. (MIRA 10:11)
(Water-jet)

RADUS-ZEN'KOVICH, A., general-mayor inzhenerno-tekhnicheskoy sluzhby.

Story of the development of tanks ("Tanks" by V.D. Mostovenko. Reviewed by A. Radus-Zen'kovich). Tankist no.5:62-64 My '56. (MIRA 11:3)
(Tanks (Military science))
(Mostovenko, V.D.)

RADUS-ZEN'KOVICH, V.A. (Leningrad)

Towards the fulfillment of V.I.Lenin's instructions concerning the protection of labor and the workers' health and life. Zdrav. Ros.Feder. 1 no.9:25-28 S '57. (MIRA 10:11)
(LABOR AND LABORING CLASSES--MEDICAL CARE)

RADUS-ZEN'KOVICH, V.A. (Moskva)

History of Soviet social insurance. Sov.med. 21 no.10:138-143 O '57.
(SOCIAL SECURITY in Russia) (MIRA 11:1)

S/081/62/000/013/042/054
B156/B101

AUTHORS: Radushnova, T. A., Lepikhova, L. A., Zhuraleva, Ye. S.

TITLE: A new standard for petroleum bitumens

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 13, 1962, 532, abstract 13M190 (Str-vo truboprovodov, no. 12, 1961, 11)

TEXT: A ГОСТ (GOST) Standard for petroleum bitumens used in insulating oil and gas pipe lines has been prepared. This Standard provides for three grades of bitumen, more stringent requirements being made as regards needle penetration depth, extensibility, and softening point for the БНИ-IV (BNI-IV) and БНИ-V (BNI-V) bitumens. The BNI-IV-3 (winter) grade bitumen which has restricted paraffin (≤ 4 %) and sulfur (0.2 %) contents has been introduced for all-the-year-round insulation purposes. Additional requirements are introduced restricting the saturation with water over 24 hours. [Abstracter's note: Complete translation.]

Card 1/1

RADUSINOVIC, Pavle (Titograd)

Fishing in Lake Scutari. Geogr hor 8 no.4:32-35 '62.

PAVIT, C.

A new series of crane engines. p. 470.

ELECTROTEHNICA. (Asociatia Stiintifica a Inginerilor si Tehnicienilor din Romania si Ministerul Energiei Electrice si Industriei Electrotehnice) Bucuresti, Rumania. Vol. 6, no. 12, Dec. 1958.

Monthly List Of East European Accessions (EEAI) LC Vol. 8, No. 6, June 1959. Uncl.